

DISCUSSION: CLINICAL PHASES

NELLIS B. FOSTER

The facts brought out in Doctor Mosenthal's paper and the discussion throw into prominence the two important factors in the etiology of diabetes. These are: the immediate factor which the consensus of opinion now assumes to be a disorder of the pancreas, and the ultimate factor, the causation of the deficiency of the pancreas. There is constantly increasing evidence that the ultimate factor in diabetes is inheritance. If diabetes be an heritable disease, then any attempt at the eradication of the disease must depend upon eugenics. It is conceivable, if diabetes is heritable, that the propensity to the disease is different in different individuals. If this propensity is very pronounced the disease develops in early life, if it is slight it develops in later life or depends upon circumstance. Now, circumstance is environment—a very complex matter including nourishment, occupation and many other factors. It seems, then, a little dubious whether it is possible to entertain much hope of controlling the incidence of diabetes if this incidence depends, in the first instance on inheritance, and in the second upon environment. In the last analysis both factors mean for the individual a self-imposed discipline in life which we could hardly expect, human nature being what it is. It seems to me that we ought to face the fact that diabetes is likely to increase, simply, because we now have at our hands a means of keeping diabetics in relative health and tainted stocks are sure to propagate.

While control of incidence seems dubious, we are however on sure ground in our ability to aid the individual who has diabetes. His outlook not only for life but also for comfort and happiness can hardly be compared with that outlook a decade ago. When we think of the treatment of diabetes we think first of diet. But with insulin, diet is gradually becoming less and less a matter of restriction in food, rather, it is a search for the proper quantities and character of foods required by different persons. Measured

in calories, two individuals of approximately the same age, height and weight may differ by as much as fifty per cent in the amount of food necessary to keep them in a state of good nutrition. There is then, in my opinion, no such thing as a standardized diet for diabetics. The problem must be worked out for each individual and the test of success is the state of nutrition and the energy that the person has. There has been a great departure from the older ideas, chiefly, with regard to carbohydrate intake. I presume that at present the average adult diabetic among my patients is taking somewhere between two hundred and two hundred and fifty grams of carbohydrate a day. It is on carbohydrate that we depend particularly to change caloric intake. Protein is more or less fixed and the majority of people do not care for fat excepting as butter and cream. There is a good deal being said about fat in relation to the development of arteriosclerosis. The only definite evidence we have at the present time is derived from animal experimentation and it is wholly unsafe to assume that like conditions prevail with human beings.

In arranging the life of a diabetic, sufficient attention is not given to exercise. It is commonly recognized that exercise increases the ability of the tissues to utilize sugar; this is exemplified in the fact that patients who are using insulin require less when they are taking exercise. But this principle is not largely applied in the general management of this disease. It would be better if it were.

The third important consideration in treatment is the psychic state of the patient. I should like to amend the definition of good treatment that has been given by Doctor Mosenthal, who mentioned the laboratory tests and the standards which must be met. That is not sufficient. Laboratory standards may be met and yet the patient may not be in a state of mental serenity and so reconciled to his handicap that he can carry on his life in the healthy way. It is sometimes difficult to educate a patient to live in harmony with his disease, but it is absolutely essential, I think, that this be done. With children it is usually not

difficult and the necessary formalities become habits which sink into the background of consciousness; the same thing, however, must be done with adults. The ideal is to teach patients to give themselves good care and at the same time not to become emotionally obsessed by the necessities.

DISCUSSION: RECENT TRENDS IN DIABETES MORTALITY

LOUIS I. DUBLIN, PH.D.

Dr. Mosenthal's paper and the discussions by Dr. Joslin, Dr. Bolduan and Dr. Foster have been so rich in content that it is hardly necessary for me to present a set paper on diabetes. Possibly the most useful contribution that I can make is to touch on the high spots in these several papers, to help leave in your mind a unified impression and more especially would I touch on those aspects of the problem that relate to the control of this condition as a public health measure.

The first point that I would make is that diabetes today presents a serious and growing public health problem. This has developed in the course of the present generation. Thirty years ago diabetes was a minor cause of death. Even if we grant the incompleteness of registration, it is perfectly clear that a relatively small number of deaths from diabetes actually occurred. Today, it is tenth in the list of causes of death. Among females, it is ninth in order of importance and if we limit our comparison to ages 45 and over, it is seventh in order of importance as a cause of death. Today, more women over 45 years of age die of diabetes than of tuberculosis. In fact, we know that from two to three per cent of our present population will ultimately die of diabetes. It is for these reasons that more and more public and medical attention must be directed to the problem of diabetes, and an organized program of control developed, as was done for tuberculosis a generation ago.

I would not, however, exaggerate the seriousness of the present diabetic situation. It is easy to overstate the case.